

IN THE CLAIMS

1. (Currently Amended) A method, comprising:

~~-for forming an insulating film in a semiconductor device, wherein characterized in that a step of forming an~~ the insulating film so as to have ~~has~~ a thickness in the range of 0.3 to 2 nm; and

~~-and a step of removing impurities from the insulating film are repeated a plurality of times, wherein the removing impurities is performed at a temperature greater than 500°C,~~ to form an insulating film having a prescribed thickness.

2. (Currently Amended) The method for forming ~~an~~ the insulating film in a semiconductor device ~~in~~ of claim 1, wherein the step of removing impurities is performed in a reducing gas atmosphere or an oxidizing gas atmosphere.

3. (Currently Amended) The method for forming an insulating film in a semiconductor device ~~as in~~ of claim 1, wherein the removing impurities a plurality of times comprises:

wherein the step of removing impurities is performed in a first treatment in a reducing gas atmosphere; and

removing impurities in a second treatment in reducing gas atmosphere combined with an oxidizing gas atmosphere.

4. (Currently Amended) The method for forming an insulating film in a semiconductor device ~~as of~~ in claim 2, wherein the reducing gas atmosphere in the step of removing impurities is formed ~~of~~ comprises any of single gases of an ammonia gas, a hydrogen gas and an inert gas, a combination comprising at least one of the foregoing a mixed gas of these gases, or plasma nitrogen, or the reducing gas atmosphere is formed in a vacuum.

5. (Currently Amended) The method for forming an insulating film in a semiconductor device ~~as of~~ in claim 2 or 3, wherein the oxidizing gas atmosphere ~~in the~~

~~step of removing impurities is formed of any of single gases or comprises an oxygen gas, a nitrogen monoxide gas, a nitrous oxide gas, and an ozone gas, or a combination comprising at least one of the foregoing gases, a mixed gas of these gases or plasma oxygen.~~

6. (Currently Amended) The method ~~for forming an insulating film in a semiconductor device as in~~ of claim 3, wherein the reducing gas atmosphere ~~in the step of removing impurities is formed of any of single gases or comprises~~ an ammonia gas, a hydrogen gas, and an inert gas, or a combination comprising at least one of the foregoing a mixed gas of these gases, or plasma nitrogen, or the reducing gas atmosphere is formed in a vacuum.

7. (Currently Amended) The method ~~for forming an insulating film in a semiconductor device as in~~ of claim 3, wherein the oxidizing gas atmosphere ~~in the step of removing impurities is formed of any of single gases or comprises~~ an oxygen gas, a nitrogen monoxide gas, a nitrous oxide gas, and an ozone gas, or a combination comprising at least one of the foregoing a mixed gas of these gases, or plasma oxygen.

8. (New) A method, comprising:
forming an insulating film in a semiconductor device, wherein the insulating film has a thickness in the range of 0.5 to 2 nm; and
removing impurities from the insulating film a plurality of times to form an insulating film having a prescribed thickness.

9. (New) A method, comprising:
forming an insulating film in a semiconductor device, wherein the insulating film has a thickness in the range of 0.3 to 2 nm; and

removing impurities from the insulating film a plurality of times to form an insulating film having a prescribed thickness, wherein the removing impurities a plurality of times comprises:

removing impurities in a first treatment in a reducing gas atmosphere; and
removing impurities in a second treatment in an oxidizing gas atmosphere.